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IMPACT OF PROGRESSIVE SPEED TRAINING ON URBAN AND RURAL ADOLESCENT SCHOOL BOYS

Dr. A.Mahaboobjan
Professor, Department of Physical Education and Yoga, Bharathidasan University, Tiruchirappalli, Tamilnadu, India. e-mail: amjbdu@gmail.com. Mob: 9442729944

ABSTRACT

The purpose of the study aims to identify the impact of progressive speed training basis on the duration of training of the urban and rural adolescent school boys. To achieve the purpose of the study forty (80) school boys were randomly selected as subjects from various places of urban and rural school boys from Salem District, Tamilnadu. Their age ranged between 14 to 17 years. They were divided into four equal groups such as experimental group I, experimental group II, control group I and control group II. These four groups were further divided into two experimental groups and two control groups and in each of the groups, there were 20 students. Initially, 4 weeks of uniform conditioning training was given to all groups before the pretest T1 was conducted. Further, consecutively 3 more post-tests (T2, T3, & T4) were conducted after every 4 weeks providing progressive speed training. In the descriptive part Mean trimming was revealed. For the comparison of performed Tests timing, MANOVA, ANOVA, and LSD post hock test were employed. The result of the study reveals that urban and rural adolescent school boys responded positively with the designed progressive speed training. This progression of sprint test timing took place progressively over time on the urban and rural boys distinctly within the groups. Progression of urban boys took place from Test 1 to Test 2 numerically but not statistically, which is the dissimilarityin the process of progression of speed ability with the urban boys. It is concluded that alike progressive speed training is equally effective for the urban and rural adolescent schoolboys but the progression of rural boys begins a bit slower in the early stages than the urban in the sprint ability.

Keywords: Progressive Sprint Training, Urban and Rural, Adolescent Boys.

INTRODUCTION

Adolescence is characterized by biological, physical, psychological and social changes, with potential direct impacts on daily activities. The number of youth who do not comply with the World Health Organization recommendations on daily physical activity is on the rise. Several factors may account for this scenario, such as time spent on electronic devices, passive travel to school, lack of Physical Education in schools, limited access to settings providing opportunities for physical activity, lack of maternal physical activity and low schooling and income levels. These are alarming facts, which may be related to developing chronic degenerative disease and mortality risks (Nakamura, 2013).

Studies with different designs suggest that both the level of physical activity and fitness of youth and adults are related to, or may be influenced by, the environmental context in which they live. Given the environment is a determining factor of lifestyle, people living few kilometers apart, in the same geographical area, may have different lifestyles when it comes to physical activity, particularly when rural and urban areas are compared. Greater availability

of equipment and public leisure spaces in urban areas, such as squares, courts, pedestrian boulevards and bike paths, may be associated with high levels of physical activity **(Tenorio, 2010).**

Urban and rural areas may be associated with two different lifestyles and environment characteristics may contribute to lower levels of physical activity and fitness in adolescents. However, studies addressing physical activity levels and sedentary behavior in adolescents living in rural areas are scarce, and few studies control for these variables in the analysis. Such data may be used to plan interventions aimed to promote healthier habits among adolescents, in an effort to reduce health problems in adulthood, given the associations between diseases and risk behaviors at a younger age **(Hallal, 2006).**

METHODOLOGY

The purpose of the study aims to identify the impact of progressive speed training basis on the duration of training of the urban and rural adolescent school boys. To achieve the purpose of the study forty (80) school boys were randomly selected as subjects from various places of urban and rural school boys from Salem District, Tamilnadu. Their age ranged between 14 to 17 years. They were divided into four equal groups such as experimental group I, experimental group II, control group I and control group II. These four groups were further divided into two experimental groups and two control groups and in each of the groups, there were 20 students. The Experimental groups underwent respective training period for three days per week alternatively for twelve weeks. Training session consist of approximately 90 minutes, including warm up and cool down. The dependent variables selected for the collection of the timing as data of 60 meter sprint test was conducted in well-marked track and recorded the given performance score in seconds.

Table I: Training Programme Schedule

Week	Specific Speed Training Program		
	Day - 1	Day - 2	Day - 3
1-4th Weeks	80-meter run, 90-meter run, 110-meter run, 120-meter run and 150-meter run. (Walk back recovery 70%-80% mintensity	(30 meter run x 3 time) x 2 repetition. (50 meter run x 2 time) x 2 repetition. (80 meter run x 2 time) x 1 repetition. (Walk back recovery 60%-80% intensity).	(80 meter run x 3 time) x 1 repetition. (90 meter run x 2 time) x 1 repetition. (110 meter run x 2 time) x 1 repetition. (120 meter run x 1 time) x 1 repetition. (Walk back recovery 60%-80% intensity).
5 – 8th Weeks	(30 meter run x 3 time) x 3 repetition. (40 meter run x 2 time) x 3 repetition. (50 meter run x 1 time) x 3 repetition. (Sub maximum effort).	110-meter run, 90-meter run, 80-meter run, 90-meter run and 110-meter run. (Sub maximum effort).	(60 meter run x 2 time) x 2 repetition. (80 meter run x 1 time) x 2 repetition (90 meter run x 2 time) x 1 repetition. (Sub maximum effort).
9- 12th Weeks	(30 meter run x 3 time) x 4 repetition. (40 meter run x 3 time) x 4 repetition. (50 meter run x 2 time) x 2 repetition. (Full effort).	80-meter run, 90-meter run, 110-meter run and 120-meter run. (Maximum effort).	(60 meter run x 2 time) x 2 repetition. (80 meter run x 3 time) x 1 repetition. (90 meter run x 2 time) x 1 repetition. (Maximum effort).

ANALYSIS OF DATA

All the subjects were tested prior to and immediately after the experimental period on the selected dependent variable. Further, 4 weeks of progressive speed training have been given on experimental groups only in 3 spells and then after every spell of training same post-tests (T2, T3, & T4) was repeated on the experimental and control groups to collect time data. In the descriptive part mean timing was revealed. For the comparison of performed tests timing ANOVA test were employed. The result of the study reveals that urban and rural adolescent school boys responded positively with the designed progressive speed training. This progression of sprint test timing took place progressively over time on the urban and rural boys distinctly within the groups. Progression of urban boys took place from Test 1 to Test 2 numerically but not statistically, which is the dissimilarity in the process of progression of speed ability with the urban boys. The 60-meter Sprint test mean timing for numeric interpretation of four tests within each group shows that in the Experimental groups' tests timings sharply decline that means performance improved as urban Experimental mean timing T1, T2, T3, & T4 are 9.95, 9.47, 9.00 & 8.61 respectively, and rural Experimental mean timing T1, T2, T3, & T4 are 10.03, 9.52, 8.99 & 8.26 respectively. On the other hand, in both the Control groups slightly performance decline that the mean timings of the tests more or less increased with slight fluctuation as urban Control mean timing 10.09, 10.20, 10.27 & 10.24 successively of T1, T2, T3, & T4, and rural Control mean timing 10.06, 10.19, 10.18 & 10.24 successively of T1, T2, T3, & T4. The post test mean values of experimental and control groups on speed are graphically represented in the figure 1.

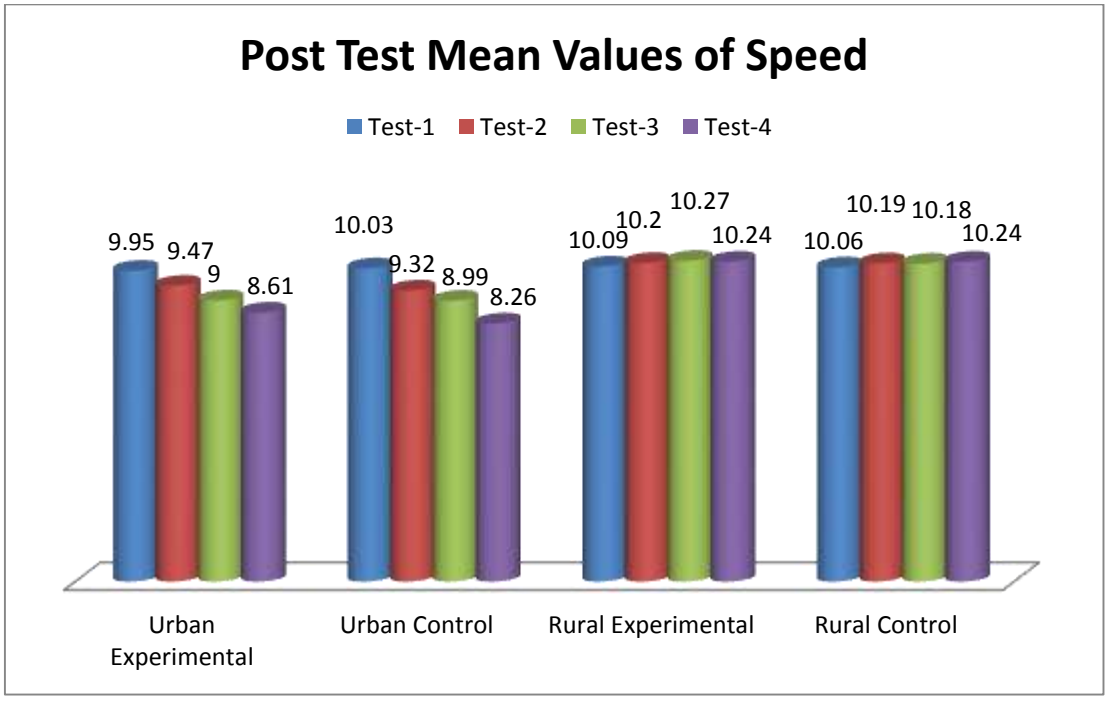

Figure 1: Post Test Mean Values of Experimental and Control Groups on Speed

Table II: Computation of Analysis of Covariance on Speed among Urban and Rural Adolescent School Boys

Post Test Means									
S.No.	Group	Week	Mean Values	SOV	Df	MS	F-ratio	Sig.	Observed Power
1.	EX.G I	T1 T2 T3 T4	9.947 9.469 9.003 8.607	B.S. W.S.	3 76	6.720 1.434	**4.686**	**.005**	**.880**
2.	C.G I	T1 T2 T3 T4	10.190 10.204 10.266 10.242	B.S. W.S.	3 76	0.122 0.505	0.241	.867	.094
3.	EX.G II	T1 T2 T3 T4	10.028 9.521 8.996 8.262	B.S. W.S.	3 76	11.400 0.371	3.770	.000	1.000
4.	C.G II	T1 T2 T3 T4	10.058 10.188 10.177 10.236	B.S. W.S.	3 76	0.115 0.285	0.403	.751	.127

e. Computed using alpha =.05

Table II describes that each ANOVA was tested with the Bonferroni method at α = .05 level. Results confirmed that there was enough evidence to reject the null hypothesis for urban experimental and rural experimental groups' post-tests. Urban Experimental Group: F (3, 76) = 4.686, p> .001, partial η^2 = .156, observed power = .880. Rural Experimental Group: F (3, 76) = 30.770, p< .001, partial η^2 = .548, observed power = 1.000. The effect size of both the Experimental groups was large for all post-test ANOVAs. Statistically, significant differences exist among the dependent variables' scores of both rural and urban experimental groups. The observed power of .880 & 1.000 respectively for the urban experimental group and rural experimental group indicated that there were 88%, & 100% chances that the result could have come out significant for all analyses. On the contrary, no statistically significant differences have been reported in both control groups.

RESULTS AND DISCUSSIONS

The 60 mts sprint test timing persistently decreased that mean performance improved for both the experimental groups of the urban and the rural students. On the other hand, control groups of the rural students and urban students almost slightly progressively increased test timing that means performance decreased progressively in the 60 mts sprint test. Further, resolute of the progressive speed training reflected on experimental groups as all the test scores differ significantly with each other within the experimental groups of rural students and urban adolescence school boys with an exception between Test-1 & Test-2 of the urban students although numeric progress is evidenced.

The 60 mts sprint test timing persistently decreased that mean performance improved for both the experimental groups of the urban and the rural students. The phenomenon of progression

of continuous performance of sprint test timing most probably has resulted in both the experimental groups of the rural and urban students due to the positive effect of progressive speed training. As well planned long-term Progressive loading training ensures performance development and sustainability. The distinct nature of speed performance development takes place due to the racial differences that exist between these two groups, though they inhabit the same geographic area. The racial groups and even sub-divisions of these racial groups respond differently with speed training **(Mukherjee, 1987).** This racial difference might have played a role differently in the pattern of speed development. On the other hand, control groups of the rural Students and urban students almost slightly increased test timing progressively that the mean performance of the 60 mts sprint test timing progressively decreased. Among the students of control groups of rural and urban students almost continuous.

CONCLUSIONS

It is concluded that progressive speed training is equally effective for the urban and rural adolescent schoolboys but the progression of rural boys begins a bit slower in the early stages than the urban in the sprint ability.

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